

### Rejections Under 35 U.S.C. § 112

Claims 6-8 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant traverses the rejections.

The office action states that "slightly greater than 7 microns" is confusing. Applicant respectfully disagrees and respectfully submits that "slightly greater than 7 microns" is not indefinite to one skilled in the art when considered in light of the application disclosure.

The Board of Patent Appeals and Interferences has stated:

In rejecting a claim under the second paragraph of 35 U.S.C. § 112, it is incumbent on the examiner to establish that one of ordinary skill in the pertinent art, when reading the claims in light of the supporting specification, would not have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims. *Ex parte* Wu, 10 USPQ 2d 2031, 2033 (B.P.A.I. 1989)(citing *In re* Moore, 439 F.2d 1232, 169 USPQ 236 (C.C.P.A. 1971); *In re* Hammack, 427 F.2d 1378, 166 USPQ 204 (C.C.P.A. 1970)).

The M.P.E.P. adopts this line of reasoning, stating that:

The essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (1) The content of the particular application disclosure;
- (2) The teachings of the prior art; and
- (3) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. *M.P.E.P.* § 2173.02.

Applicant respectfully submits that the claim language in question, when analyzed in light of the content of the application disclosure, is not indefinite. The application disclosure, at page 5, lines 10-13, recites the following: "The dielectric sheets are fabricated from barium titanate and have a thickness of between about 5 microns and about 7 microns. The tungsten paste forms the conductive layers 103-106 of capacitor 100. To add strength to the stack, slightly thicker dielectric sheets are used to form the top and bottom layers of the stack."

(emphasis added) Hence, claims 6-8 are not indefinite. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 6-8.

### Rejections Under 35 U.S.C. §102

Claims 1, 4, and 5 were rejected under 35 U.S.C. §102(e) as being anticipated by Herrell et al. (U.S. Patent No. 6,191,479 B1).

Applicant does not admit that Herrell et al. is prior art and reserves the right to swear behind Herrell et al. as provided for under 37 C.F.R. 1.131.

Claim 1 is amended to recite "at least four conductive layers embedded in a dielectric."

In contrast, Herrell et al. in FIG. 1 shows and described two conductive layers 13 and 14.

Hence, Herrell et al. fails to teach each of the elements of claim 1, as amended.

Thus, the office action fails to establish a *prima facie* case of obviousness with respect to claim 1.

Therefore, applicant requests withdrawal of the rejection and reconsideration and allowance of claim 1.

Claims 4-5 are dependent on claim 1. For reasons analogous to those stated above and elements in the claims, applicant respectfully submits that claims 4-5 are not anticipated by Harrell et al. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 4-5.

Claims 9-10 were rejected under 35 U.S.C. §102(e) as being anticipated by Farooq et al. (U.S. Patent No. 6,072,690). Applicant traverses the rejections.

Applicant does not admit that Farooq et al. is prior art and reserves the right to swear behind Farooq et al. as provided for under 37 C.F.R. 1.131.

Claim 9 recites "a plurality of substantially rigid outer surfaces." Applicant respectfully submits that Farooq et al. does not teach "a plurality of substantially rigid outer surfaces." In the detailed description of FIG. 3A, at column 5, lines 6-32 of Farooq et al., the term rigid is not used. In fact, the detailed description in Farooq et al. does not include any discussion of the rigidity of the outer surfaces of FIG. 3A. Thus, Farooq et al. does not teach each of the elements of claim 9, so Farooq et al. does not anticipate claim 9. Applicant acknowledges that the office

action shows FIG. 3A and 3B with the outer layers labeled as "rigid" surfaces. Applicant respectfully submits that the reference must teach a "rigid" surface and relabeling a reference drawing in an office action is not sufficient to overcome the deficiencies in the reference in establishing a *prima facie* case of obviousness. Therefore, applicant requests withdrawal of the rejection and reconsideration and allowance of claim 9.

Claim 10 is dependent on claim 9. For reasons analogous to those stated above and elements in the claim, applicant respectfully submits that claim 10 is not anticipated by Farooq et al. Therefore, applicant requests withdrawal of the rejection and reconsideration and allowance of claim 10.

#### Rejections Under 35 U.S.C. § 103

Claims 2-3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Herrell et al. (U.S. Patent No. 6,191,479 B1). Applicant traverses the rejections.

Applicant does not admit that Herrell et al. is prior art and reserves the right to swear behind Herrell et al. as provided for under 37 C.F.R. 1.131.

With respect to claim 2, the office action states: "It would have been an obvious matter of design choice to form the capacitor of Herrell having a thickness of between .5 mm to 1mm, since such a modification would have involved a mere change in the size of a component." Applicant respectfully disagrees. Applicant submits that in the art of forming capacitors, forming capacitors that have a plurality of conductive layers coupled to a plurality of connection sites forming a capacitor that has a thickness of between .5 mm and 1 mm is not a matter of obvious design choice. The office action cites to *In re Rose*, 105 USPQ 237 (CCPA 1955) and states that a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose* is directed to lumber packaging while the present invention is directed to capacitor design. Applicant respectfully submits that the rule of *In re Rose* grounded in the facts of lumber packaging is not applicable to the design of capacitors because lumber packaging and capacitor design are technologies in which scaling has different consequences. However, even if *In re Rose* is applicable, all the elements of the rejected claim are not found in Herrell et al. (claim 2 is dependent on claim 1 and claim 1 recites "a plurality of conductive layers embedded

in a dielectric” as discussed above) and since the office action does not cite another reference that discloses all the elements of claim 2, applicant assumes that the rejection is based on facts within the personal knowledge of the Examiner. Therefore, applicant respectfully requests that the Examiner provide an affidavit as required by MPEP § 2144.03. If the Examiner cannot provide an affidavit, applicant requests withdrawal of the rejection and reconsideration and allowance of claims 2.

With respect to claim 3, the Office action states: “It is well known in the capacitor art to form capacitors having a particular capacitance for an electrical system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the capacitor of Herrell et al. having a capacitance of 20 to 30 microfarads ...” Applicant respectfully disagrees. Applicant submits that in the art of forming capacitors, forming capacitors that have a plurality of conductive layers coupled to a plurality of connection sites forming a capacitor that has a thickness of between .5 mm and 1 mm and that has a capacitance of 20 to 30 microfarads is not a matter of obvious design choice. The complex combination of capacitance value, thickness, and a plurality of conductive layers coupled to a plurality of connection sites differs significantly from the prior art. The office action cites to *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), and states that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch* is directed to alloy design while the present invention is directed to capacitor design. Applicant respectfully submits that the rule of *In re Boesch* grounded in the facts related to alloy design is not applicable to capacitor design because the process for designing alloys is different from the process for designing capacitors. Capacitor design does not involve a “result effective variable” which is central to *In re Boesch*. However, even if *In re Boesch* is applicable, all the elements of the rejected claim are not found in Herrell et al. (claim 3 is dependent on claim 1 and claim 1 recites “a plurality of conductive layers embedded in a dielectric” as discussed above with respect to claim 1) and since the office action does not cite another reference that discloses each of the elements of claim 3, applicant assumes that the rejection is based on facts within the personal knowledge of the Examiner. Since each of the elements of the rejected claim is not found in Herrell et al. and since the office action does not cite another reference that discloses each of the elements of claim 3, applicant assumes that

the rejection is based on facts within the personal knowledge of the Examiner. Therefore, applicant respectfully requests that the Examiner provide an affidavit as required by MPEP § 2144.03. If the Examiner cannot provide an affidavit, applicant requests withdrawal of the rejection and reconsideration and allowance of claims 3.

Claims 6-8 and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Farooq et al. (U.S. Patent No. 6,072,690). Applicant traverses the rejections.

Applicant does not admit that Farooq et al. is prior art and reserves the right to swear behind Farooq et al. as provided for under 37 C.F.R. 1.131.

Claim 6 recites "a pair of dielectric sheets, each of the pair of dielectric sheets having a thickness slightly greater than about 7 microns, for providing a pair of substantially rigid outer surfaces for the plurality of second conductive layers interlaced with the plurality of first conductive layers." Applicant respectfully submits that Farooq et al. does not teach or suggest this element. With respect to the thickness of the dielectric sheets, Farooq et al. at column 6, line 25, states: "Referring to FIG. 4a a green ceramic sheet 80 (thickness to be determined by final product requirements), has placed therein one or more holes 82 (also known as vias) in it." Hence, Farooq et al. does not teach or suggest "substantially rigid outer surfaces." Thus, since Farooq et al. does not teach or suggest each of the elements of claim 6, the office action does not state a *prima facie* case of obviousness with respect to claim 6. Therefore, applicant requests withdrawal of the rejection and reconsideration and allowance of claim 6.

Claim 7 is dependent on claim 6, so claim 7 includes all of the elements of claim 6. Applicant respectfully submits, as argued above, that Farooq et al. does not teach or suggest each of the elements of claim 6. Therefore, Farooq et al. does not teach or suggest each of the elements of claim 7, and the office action does not state a *prima facie* case of obviousness with respect to claim 7. Therefore, applicant requests withdrawal of the rejection and reconsideration and allowance of claim 7.

Claim 8 is dependent on claim 6. For reasons analogous to those stated above and elements in the claim, applicant respectfully submits that claim 8 is not anticipated by Farooq et al. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claim 8.

Claims 11 and 12 are dependent on claim 9, so claims 11 and 12 include all of the elements of claim 9. Applicant respectfully submits, as argued above, that Farooq et al. does not teach or suggest each of the elements of claim 9. Specifically, Farooq et al. does not teach "a plurality of substantially rigid outer surfaces." Therefore, since Farooq et al. does not teach or suggest each of the elements of claims 11 and 12, the office action does not state a *prima facie* case of obviousness with respect to claims 11 and 12. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 11 and 12.

### Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone applicant's attorney at 612-371-2109 to facilitate prosecution of the application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Box AF, Commissioner of Patents, Washington, D.C. 20231, on this 11 day of January, 2002.

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